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AUTHOR Jacobson, Carol Valera; Meyer, Tracy
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ABSTRACT

This study investigated the effectiveness of the Child and Adolescent Functional Assessment Scale (CAFAS) for assessing the functioning of youth with mental disorders. The CAFAS is a multidimensional tool used to record the extent to which a youth's mental health disorder is disruptive of functioning in each of five psycho-social areas: role performance, thinking, behavior towards others, moods, and substance abuse. The CAFAS was used to collect admission data on 213 patients (ages 3-20) at a residential center and discharge scores for 102 patients. Initial results using the CAFAS were encouraging; patients typically had a total admission CAFAS score of over 80, indicating a need for intensive services. Patients admitted to the center were most likely to show disturbances in function for role performance, behavior toward others, or moods. Average scores showed a statistically significant change at discharge, indicating patients were improving their levels of functioning during treatment. A group of 28 patients with lengths-of-stay under 31 days also showed statistically significant changes in their scores after treatment, suggesting that the CAFAS can detect changes in levels of functioning independent of length-of-stay. (CR)

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Assessment of Patient Functioning in a Child and Adolescent Psychiatric Facility

Authors

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U.S. DEPARTMENT OF EDUCATION

Introduction

Cleo Wallace Center (CWC), like many other residential psychiatric facilities is finding third-party payers (i.e., insurance companies, departments of social services) and referral sources increasingly interested in outcome tools that measure the effectiveness of treatment. Third party payers are also seeking the least expensive care option (often translated into least restrictive care setting) for children and adolescents. In this climate, service providers must find ways to attract and retain customers and demonstrate that the services being provided are appropriate, effective, and cost-efficient.

In order to address these questions, the Child and Adolescent Functional Assessment Scale (CAFAS) was identified as the tool that would work best with our facility (Hodges, Bickman, & Kurtz 1991). The CAFAS was chosen because of it's multidimensional nature (five separate subscales and a total score), the ease of scoring, inexpensive start up costs, and understandable training materials. In addition, the scores are based on a child's observable, specific behaviors.

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Method

Starting in 1994, all out-of-state patients admitted into the residential program after January 1 were scored at admission and at discharge. Scores were assigned by residential clinicians. After eight months (September, 1994), all residential clients were scored at admission and at discharge. In January, 1995, all day treatment clients were added to the list of patients to be scored. A tracking system was set up to notify residential clinicians when a CAFAS needed to be scored for a client (either at admission or at discharge). Beginning in January, 1996, all patients admitted to CWC will be assigned a CAFAS score at admission and at discharge, providing a larger sample of the 800 patients a year admitted with lengths-of-stay from 3 to 25 days.

Subjects

Admission scores were collected on 213 patients. A total of 102 of those patients also had discharge scores.

The average age for all patients with admission scores was 13.8 years, with a range from 3.4 years to 20.8 years. Eighty-eight girls and 125 boys had admission scores. Sixty-four percent of the patients with scores were Caucasian; 17% were African-American; 12% were Hispanic; and 8% were of some other ethnic background. Over half (56%) of these patients were Colorado residents. The other patients came from Nevada (13%), Pennsylvania (13%), Nebraska (10%), or other states (8%).

Patients with both CAFAS scores had an average age of 14 years. Of these, 54% were boys, and 46% were girls. A total of 69% were Caucasian; 13% were African American; 11% were Hispanic; and 7% were some other ethnic background. The average length-of-stay was 5 months, with a range from 4 days to 17 months.

Twenty-eight patients with both CAFAS scores who had lengths-of-stay under 31 days were considered separately. An updated analysis will be done on patients with short lengths-of-stay (3 to 25 days) after January 1, 1996, when implementation of the CAFAS in the hospital program begins.

Measure

The CAFAS is a multidimensional tool used to record the extent to which a youth's mental health disorder is disruptive of functioning in each of five psycho-social areas: (a) role performance, (b) thinking, (c) behavior towards others, (d) moods, and (e) substance use. For each item, a score is assigned. A total score is calculated by adding all subscale item's scores.

Two versions of the CAFAS tool were used during this study. The first version did not include subscale items for

study. The first version did not include subscale items for Role Performance (school, home, community) or Moods (emotions and self harm). Moods and Role Performance scores were calculated for the 48 revised versions by taking the highest of the subscale items.

Procedures

Residential clinicians were assigned to every residential or day treatment patient at the time of admission, and were determined to be most familiar with each patient and thus best able to accurately assign individual CAFAS scores. They were responsible for therapy (i.e., individual, group, and family), treatment program planning, and working with families and caseworkers on discharge plans. Since January, 1994, 20 residential clinicians (5 men and 15 women, all with Master's level backgrounds) have assigned CAFAS scores. Ten of these residential clinicians were required to attend a two-hour training session on using the CAFAS. The other ten were hired later and received supervision in the use of the CAFAS.

Each residential clinician was required to assign a CAFAS score to patients after admission to the residential or day treatment program. The expectation was that the scores would be assigned within three weeks. Forty-six percent of the scores were assigned within three weeks. Some youth had been in the hospital program prior to transfer into the residential or day treatment program, and such patients were not assigned a CAFAS score at admission to the facility but rather when they were transferred into the residential or day treatment program. It is not currently known how long after admission to the residential program these patients were assigned a score.

At the time of discharge from the facility (or within one week), residential clinicians were expected to assign discharge scores. Only twenty-three percent of discharged patients were assigned a discharge score within one week. Sixteen percent were assigned scores within two weeks.

Analysis

Frequencies and comparison of means tests were used to analyze the 315 scores collected between January, 1994 and September, 1995. Mean scores were compared by gender and race with no statistically significant differences found. Additional means testing will be done by age, length-of-stay, state of residence, placement before and after treatment, and diagnosis for the final presentation of this study. Paired sample t-tests were used to test for significance in paired scores (admission and discharge).

Results

Initial results using the CAFAS were encouraging; patients typically had a total admission CAFAS score of over 80 indicating a need for intensive services. The total average

indicating a need for intensive services. The total average score was 90.1. Figure 1 describes the average scale scores at admission for 213 patients.

Patients admitted to CWC were most likely to show disruptions in function for Role Performance (74% demonstrated severe levels of impairment), Behavior Towards Others (35% showed severe levels of impairment), or Moods (36% demonstrated severe levels of impairment). Figure 2 illustrates the percentage of patients with a severe impairment rating at admission and discharge.

Statistically significant differences were found for all subscale scores and for the total CAFAS score for 102 patients with both scores ($p < .01$). Figure 3 describes the admission and discharge scores.

Discussion

Patients admitted to CWC residential programs have an average TOTAL score on the CAFAS of 90.1 indicating a need for intensive services (i.e., the kind of services available in CWC's residential treatment program). The highest average scores were in Role Performance, Behavior Towards Others, and Moods. Patients admitted to CWC's residential program most often have mood disorders (e.g., depression, dysthymia, etc.) or behavioral disorders (e.g., ADHD, oppositional defiant disorder, impulse control disorder, etc.), which suggests face validity in describing the population being served.

Average scores show a statistically significant change at discharge, indicating that patients are improving their levels of functioning during treatment. The group of 28 patients with lengths-of-stay under 31 days also showed statistically significant changes in their scores before and after treatment in the residential program with the exception of Thinking, suggesting that the CAFAS can detect changes in levels of functioning independent of their length-of-stay.

We expect to find a relationship between length-of-stay in the inpatient program and the degree to which change is made in the levels of functioning on the CAFAS. This may allow us to describe to third party payer sources what kinds of lengths-of-stay and costs they can expect for patients with different levels of impairment. For instance, we expect to find that suicidal patients needing crises stabilization over a short length-of-stay will show marked improvement on the Moods/Self Harm scale but not necessarily any change in Behavior Towards Others. Using data from the CAFAS, we may be able to tell payers what treatment benefit (based on functional areas) they can expect to see with different lengths-of-stay. This will allow payer sources to more accurately plan for lengths-of-stay and benefits accordingly. Recidivism rates may also be affected by more effective and accurate planning based on CAFAS scores and lengths-of-stay.

Two concerns emerged through the analysis of this data. First, raters need to be more quickly prompted after admission and after discharge to assign scores. This will be addressed with the introduction of a computerized software program that allows clinicians to enter scores directly into a database with a reminder feature. This protocol is scheduled for implementation when the hospital will be added to the pool of patients being assigned CAFAS scores. Second, while inter-rater reliability appears to be acceptable, not all staff have been formally trained and inter-rater reliability tested. This will be addressed when all staff required to assign CAFAS scores will be trained in an eight-hour training program.

References

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Authors

Carol Valera Jacobson, M.P.A.
Research Analyst
Cleo Wallace Center
8405 W. 100th Ave.
Westminster, CO 80021
Voice: 303/438-2348
Fax: 303/466-0904

Tracy Meyer, B.A.
Research Assistant
Cleo Wallace Center
8405 W. 100th Ave.
Westminster, CO 80021
Voice: 303/438-2348
Fax: 303/466-0904

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